platform approach reflects the reality that the ALEC is not buying a "gateway" to other switching functions which must then be separately purchased, but is obtaining the right to use the entire switch -- and all the switch's capabilities -- to provide service to its customers.

In this regard, the claims by some ILECs (see, e.g., NYNEX at 70; SBC at 41; USTA at 34-35) that it is improper to define the switch in terms of its "capacity" because the switch is used in common for many customers, and that there is thus no way "to partition, allocate and administer these shared resources" are frivolous. No party has proposed physically partitioning the switch. The ILEC uses the hardware and software in any given switch to provide services to thousands of customers today, and assigns switch resources based on the services each customer desires. The ALEC should be able to purchase capacity that directs the ILEC to assign those switch resources to ALEC customers in the same way. This does not require the ALEC to be given any "operational control" over the switch. See Ameritech at 45-46; NPRM, ¶ 102.

3. **Databases and signaling systems: signaling links, signal transfer points ("STPs"), and service control points ("SCPs").** The ILECs admit that they must provide interconnection to their signaling networks, but do not appear to support any unbundling beyond that of their signaling networks as a whole. See, e.g., Ameritech at 46-50; BellSouth at 43; SBC at 46-48; USTA at 36. They emphasize that portions of signaling networks are increasingly available from competitive suppliers, and contend that this competition obviates the need for additional unbundling. See, e.g., BellSouth at 44-45; GTE at 40-41; NYNEX at 71; Pacific at 58, 60-61.

The ILECs miss the point. This developing competition is precisely what makes unbundling of signaling links, STPs, and SCPs necessary. Even though ILEC signaling networks now can be accessed only at STPs and not at SCPs (see, e.g., GTE at 39-40; NYNEX at 71; Pacific at 59; SBC at 46-47; USTA at 36), the SCPs still must be unbundled so that ALECs may substitute other SCPs for the ILEC's SCP and then access them through the ILEC's

STP without also being forced to pay the costs of SCPs that they do not want or need. Thus, for example, Bell Atlantic's refusal (p. 29) to provide AIN access except at the Service Management System level has meant that other carriers that wish to use their own SCPs with Bell Atlantic's signaling network have been prevented from doing so.[32]

The ILECs also claim (see Bell Atlantic at 29-30 n. 10; BellSouth at 47; SBC at 44-47) that AIN access is infeasible without development of additional mediation software. As AT&T has demonstrated, there is sufficient mediation in the ILECs' networks today to enable them to offer AIN access to competing providers. See AT&T ex parte Statement, CC Docket No. 91-346 (Aug. 21, 1995). The ILECs also continue to refuse to permit interconnecting carriers to pass TCAP messages to those networks, which prevents such carriers from offering the same advanced AIN and CLASS services as the ILECs. These refusals violate the Act's requirements that ILECs provide interconnection equal in quality to what they provide to themselves and on "just, reasonable, and nondiscriminatory" terms. See § 251(c)(2).

4. Operator systems. Many commenters, including the Justice Department, support the Commission's proposal to unbundle operator systems used to provide call completion services.[33] No commenter disputes its technical feasibility. Indeed, a recent Proposed Order of the Illinois Commerce Commission rejects claims by Ameritech that such unbundling is not

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[32] Several ILECs state that it is infeasible to connect a third party's SCP with their signaling network, but they appear to be referring to direct connection between the other carrier's SCP and their own. See, e.g., BellSouth at 45-46; SBC at 45. There is no feasibility problem if the third party connects its SCP to its own STP, and then connects its STP to the ILEC's STP through a conventional D link.

[33] See, e.g., DOJ at 21; C&W at 20; Citizens at 15; Colorado PUC at 24; CPI at 16; Ericcson App. 1; Frontier at 17 n. 32; General at 12; MCI at 18; TRA at 36; Wyoming PSC at 21.

feasible, and orders it as "a necessary requirement for effective competition."[34]

A few ILECs nonetheless oppose such unbundling on two spurious grounds. First, some ILECs claim that operator systems are "services" and not "elements" and therefore can be purchased only under the Act's resale provisions.[35] But operator systems are "faciliti[es]" and "equipment" that are "used in the provision of a telecommunications service" to complete calls, and are therefore "network elements" subject to the Act's unbundling requirement. See § 153(45). Second, these same ILECs note that operator systems are often competitively available.[36] That fact, however, supports unbundling such systems so that ALECs may use those alternatives in conjunction with purchases of other ILEC elements, and are not compelled to buy ILEC facilities they do not need. Most ILECs today improperly refuse to permit independent operator service providers to interconnect their platforms to the ILEC switches, thus requiring that any purchaser of the ILEC's switch purchase the ILEC's operator systems as well. That is precisely the type of anticompetitive bundling the Act prohibits.

C. National Standards For Operational Interfaces To Assure Prompt And Nondiscriminatory Performance Of Ordering, Provisioning, Maintenance, And Billing Functions Are Essential.

No party disputes that prompt and non-discriminatory performance by the ILECs of their ordering, provisioning, maintenance and billing responsibilities is critically necessary to local competition. Indeed, even two ILECs (see SBC at 37; GTE at 9) agree that non-discrimination requires that they at least be required to provide the same installation, service, and maintenance

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[34] See Hearing Examiner's Proposed Order at 45, Petition for a Total Local Exchange Wholesale Serv. Tariff from Illinois Bell Telephone Company (Illinois Commerce Commission May 16, 1996) at 45 ("May 16 Proposed Illinois Order") (Appendix G).

[35] See, e.g., Bell Atlantic at 30; U S West at 46 n.103

[36] See, e.g., Bell Atlantic at 30; U S West at 46 n.103

intervals to competitors as they do to their own customers.[37] As AT&T has demonstrated (AT&T at 33-39), such parity requires, inter alia, national rules requiring electronic interfaces between ALEC and ILEC operational support systems that give ALECs the same ability to interface with the ILEC systems in "real time" as the ILECs have.

The May 16 Proposed Illinois Order strongly supports this nondiscrimination standard. The Hearing Examiner held (p. 51) that "equal operational interfaces" are "essential" to the development of competition, and ordered that ILECs provide all such interfaces "at parity with those provided their own retail customers." The Proposed Order further directs (p. 52) that ILECs file reports "demonstrating their compliance with this standard," and indicates that incentive discounts will be considered to encourage prompt and complete compliance. The Commission should adopt similar rules at the national level.

D. The Commission Should Expand Upon Its Prior Collocation Rules.

Having opposed the Commission's previous collocation rules both before the Commission and on appeal, the ILECs now embrace them and ask that they be reinstated without modification.[38] They ignore that the new statute imposes specific requirements that did not previously exist -- such as physical collocation at all LEC "premises" (including those on public rights of way) -- and applies to local markets that were not previously at issue. These broadened

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[37] In contrast, Bell Atlantic (p. 31) rejects even this basic nondiscrimination requirement on the untenable ground that providing unbundled elements purportedly requires "more work" than other offerings and ILECs have "little experience" providing them. To the contrary, as Figure 1 of Appendix F shows, providing unbundled elements simply requires ILECs to perform for ALECs the same tasks they already perform for their own end users. Further, as Figure 2 of Appendix F shows, ILECs will likewise continue to use the same network planning process for building and improving their networks, but will simply take into account additional inputs such as forecasts by ALECs.

[38] See, e.g., Bell Atlantic at 34-35 & n.14; GTE at 23-24; NYNEX at 66-67; SBC at 61-64; Pacific at 34; USTA at 19.

requirements necessitate the broader rules that AT&T and others have proposed, including a prohibition on ILEC limitations on the types of equipment ALECs may collocate, and specific safeguards against ILEC claims of space or technical limitations.[39]

In addition, contrary to the ILEC claims (see, e.g., Ameritech at 24-25; SBC at 66), § 251(c)(6) of the Act does not limit the Commission's authority to give ALECs the right to choose between physical and virtual collocation. Section 251(c)(6) provides merely that ILECs have the duty to provide virtual collocation whenever a state commission determines that space or technical reasons render physical collocation impractical. It does not provide that this is the only circumstance under which virtual collocation may be ordered, and, indeed, the existing virtual collocation rules properly remain in effect today. Section 251(c)(2)(B) requires that ILECs make interconnection available "at any technically feasible point within the carrier's network," and the Commission has the authority under § 251(d) to "implement" that requirement by mandating virtual collocation as an available alternative for competing carriers.

E. Section 251 Applies To Interstate Access.

Finally, the Commission should reconsider its tentative conclusion (¶ 160) that §§ 251(c)(2) and 251(c)(3) do not apply to requests by interexchange carriers solely to obtain interstate access. In particular, the American Petroleum Institute cogently explains (pp. 3-13) the misreading of § 251(c)(2)(A) on which the Commission's interpretation of § 251(c)(2) depends, and the anticompetitive consequences of that error.

At a minimum, the Commission must adhere to its tentative conclusion (¶ 164) that an ALEC using network elements to provide local service to a customer may use those same elements to provide originating and terminating access for that customer, and that it would

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[39] See AT&T at 39-42; ALTS at 21-24; Colorado PUC at 23; General at 10-11; Illinois Comm. at 33-34; Intermedia at 6-9; MCI at 53-58; MFS at 22-25; Nextlink at 20-21; Teleport at 32.

violate the § 251 and § 252 pricing standards if the ALEC were required to pay Part 69 charges in addition to network element charges. Even several ILECs agree that "Congress must have recognized that competitive providers of local exchange service would necessarily provide exchange access service on behalf of their local exchange customers." Ameritech at 19; see also NYNEX at 21-22; Pacific at 78. Interstate access is a "function" and "capability" of the loop, switching, transport, and signaling elements in the ILEC network, and an ALEC obtains rights to that function and capability when it purchases those "network elements." See § 153(45).

Moreover, the Department of Justice warns (pp. iii, 38-39) that any restriction on that right would be "particularly anticompetitive" and "dangerous," for it would "impede or prevent competitive entry" and deprive new entrants of the revenue streams necessary to support facilities-based competition. If the Commission does not achieve significant access charge reform in this proceeding, it will be making a substantial concession to the ILECs to the detriment of other carriers and consumers; it should not compound that harm by depriving ALECs of the means of mitigating some of the worst aspects of the current access structure by at least becoming the access providers for their local customers.[40]

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[40] The Commission should likewise reject (as does the Justice Department, see DOJ at 43-44) the claims of certain ILECs that CAPs that do not provide local exchange service may not interconnect for purposes of offering exchange access. See Ameritech at 17-20; BellSouth at 61-62; USTA at 24. This argument is meritless. It is based entirely on the use of the conjunction "and" in § 251(c)(2)(A), which imposes on ILECs "[t]he duty to provide" interconnection "for the transmission and routing of telephone exchange service and exchange access" (emphasis added). But Congress used "and" because it was defining the ILECs' duty, and because if it had used the word "or," the ILECs would claim that they could satisfy that duty as long as they offered interconnection for at least one of those two purposes. Congress nowhere imposed upon ALECs the obligation to order both.

III. THERE IS OVERWHELMING SUPPORT FOR TSLRIC-BASED PRICING OF INTERCONNECTION, COLLOCATION AND NETWORK ELEMENTS.

With the predictable exception of the ILECs, the commenters that address pricing standards for interconnection, collocation and unbundled network elements are virtually unanimous in their support for TSLRIC-based pricing.[41] Indeed, not even the ILECs attempt any serious economic attack on TSLRIC; their own economist affiants identify TSLRIC as the proper "starting point for calculating regulatorily mandated interconnection prices."[42] Instead, the ILECs address pricing standards that no party advocates, arguing that those strawmen standards could deprive them of full recovery of their economic costs. Then, despite the fact that the relevant TSLRIC standard will allow recovery of all of the forward-looking economic costs of the relevant carrier-to-carrier operations, the ILECs urge supposed legal obstacles to its adoption. But neither the Act nor the Constitution limits the Commission's authority -- indeed, mandate -- to promulgate these pricing standards.

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[41] See DOJ at 28 ("[p]ricing based on TSLRIC is best suited to ensure efficient and effective entry, efficient production of end services, competitive pricing to end users, and the avoidance of anticompetitive behavior by ILECs to preserve their market power.") See also, e.g., Kentucky PSC at 5 ("We agree that an incremental cost methodology, such as LRIC and TSLRIC is appropriate for pricing interconnection and unbundled network elements"); Ohio PUC at 42-43 ("The PUCO Staff concurs with the FCC that the 1996 Act provides that interconnection and network elements be priced on a forward-looking cost basis, i.e., the basis of long-run service incremental cost"); Wyoming PSC at 27 ("We believe that it would be sufficient for the FCC to require in its rules the uniform use of TSLRIC costing methods"); Texas PUC at 22-23; ALTS at 35-37; MCI at 61; ACS at 54-57; Time Warner at 51-53; TCC at 13-27; Sprint at 43-50; TRA at 38-40; C&W at 32-35.

[42] Affidavit of Jerry A. Hausman ¶ 12 (attached to USTA and Bell Atlantic comments) ("Hausman Aff."). See also Affidavit of Robert W. Crandall ¶ 10 (attached to Bell Atlantic comments) ("Crandall Aff.") ("From an economic standpoint, the pricing of any network function, whether for termination, interconnection, or any other purpose, should be based on long-run incremental costs."). Tellingly, many of the ILECs sponsor no economic testimony whatever -- for reasons that are quite obvious. Compare Cincinnati Bell at 24 ("Economists have never recommended that prices be set equal to costs.") with Hausman Aff. ¶ 11 ("Cost based prices are necessary so that both the seller and the buyer of a service will make the economically efficient choice.").

The fallacy of the ILECs' position is confirmed by their claims that the Commission must embrace fully distributed, embedded cost pricing.[43] That is the very type of "rate-of-return" and "rate-based" approach that Congress directed the Commission and the states not to use (see § 252(d)(1)(A)). It has also been universally discredited by economists (including the ILECs' own witnesses)[44] and increasingly abandoned by regulators, precisely because it encourages inefficiency, provides opportunities for anticompetitive conduct and, most importantly, would preclude the efficient entry and exit decisions that produce competitive prices.[45]

A. A Broad Array Of Commenters Agree That The TSLRIC Rules Urged By AT&T Are Necessary To Achieve The Procompetitive Policies Of The Act.

The comments confirm that the rules identified by AT&T in its initial comments are necessary to assure the network element rates upon which workable competition depends. There is widespread agreement that TSLRIC estimates be based on the forward-looking, incremental costs of an efficient, cost-minimizing competitor,[46] reflect on a unit basis the entire demand of

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[43] See, e.g., NYNEX at 52; SBC at 93; U S West at 42-43; Pacific at 66, 70; Bell Atlantic at 36; USTA at 40.

[44] See, e.g., Kahn & Shew, Current Issues in Telecommunications Regulation: Pricing, 4 Yale J. on Reg. 191, 222-24 (1987) ("Economically efficient pricing looks not to the past -- not how we got where we are -- but to the future; efficiency requires that prices tell customers what incremental resources society will use if they take more of the good or service in question. . . . There is no truism in economics more elementary than that sunk costs are to be ignored in deciding how best to use the resources that are available to us today and that will be available in the future.") (emphasis in original); Hausman & Tardiff, Efficient Local Exchange Competition, 3 Antitrust Bulletin 529, 548 (1995); Parsons, The Economic Necessity of an Increased Subscriber Line Charge (SLC) in Telecommunications, 48 Admin. L. Rev. 227, 233 & n. 19 (1996) (citing literature).

[45] See, e.g., May 29, 1996 Reply Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig ¶ 5 ("Baumol, Ordover & Willig Reply Aff.") (Appendix B).

[46] See, e.g., DOJ at 6-7 ("[f]orward-looking incremental cost is the appropriate basis"); MCI at 61-64; ACS at 57; TRA at 38-39; C&W at 33; Sprint at 44 (TSLRIC "represents the incremental costs of an entire product"); TCC at 15-17, 21; ALTS, Montgomery Stmt. at 7;
(continued...)

all uses and users of network elements,[47] recognize any significant geographic cost differences,[48] and exclude costs attributable to retailing operations.[49] Similarly, numerous commenters stress the critical importance of clear rules to confine any "mark-ups" above TSLRIC to legitimate, forward-looking shared and common costs. As the Justice Department states (p. 32):

> [W]e stress that the charges for network elements should not be burdened by any costs other than the TSLRIC and the forward-looking joint and common costs. Doing so would distort the price signals that lead to efficient production, entry, and exit. It would also depart from the important principle of competitive neutrality.[50]

The comments also remove any doubt that TSLRIC is a manageable standard with respect to which the states and the parties have accumulated a substantial body of experience -- a fact the ILECs simply ignore.[51] Thus, it is not surprising that few commenters support the TSLRIC

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[46] (...continued)
TRA at 38 ("the costs associated with providing unbundled network elements should reflect the most efficient available technology").

[47] See, e.g., TCC at 26 (TSLRIC "measures the cost per unit of the entire increment of demand"); Wyoming PSC, Attachment II at II-4 (relevant demand is "for all services or basic network functions using the plant, equipment, or other investment in question").

[48] See, e.g., Ohio PUC at 48-49 ("deaveraging is reasonable and will promote competition by encouraging entry into the market by allowing rates to be set closer to true cost"); GTE at 60 n.87; BellSouth at 54 ("From an economic standpoint, deaveraging by wire center would appear to be the theoretical ideal"); Mass. DPU at 11 n.5; Sprint at 50-51; MCI at 68.

[49] See, e.g., Statement of William P. Montgomery, at 18 (attached to ALTS comments) (most existing LEC studies "must be recast in order to separate retail costs from the underlying wholesale services").

[50] See also ALTS at 36 ("Costs simply labeled 'residual' or identified by other non-specific terminology should not be used in these studies") (emphasis in original); MCI at 64-67; TCC at 18-20.

[51] See, e.g., MCI at 65 & n.42 (noting the "growing consensus on the use of TSLRIC for measuring cost and setting rates"); ACS at 55 ("such forward-looking states as Illinois, Michigan, and California" have adopted TSLRIC-based pricing standards); C&W at 34; Conn. DPUC at 11 (TSLRIC "form[s] the bedrock to costing and pricing in Connecticut's increasingly competitive environment"); Florida PSC at 25-26; Michigan PSC at 13 ("TSLRIC is the basis for many of the elements of the Michigan law").

"proxies" described in the NPRM, which, as one ILEC explains, "are definitely inappropriate, as they would reflect neither the LRIC nor any other reasonable measure of a LEC's cost."[52]

B. The ILECs' Objections To Economic Cost-Based Pricing Are Misplaced.

1. AT&T's proposed pricing standard is fully compensatory and will promote efficient investment.

The ILECs argue at length that an incremental cost-based standard would preclude recovery of significant forward-looking economic costs shared between (or common to) network elements.[53] Even ignoring that the ILECs make no showing that the unbundling of their networks into elements that comprise discrete physical facilities will, in fact, result in significant shared and common costs, see AT&T at 62-63; DOJ at 32, no party proposes to ignore such costs. If legitimate, forward-looking costs of these types are found to exist in the carrier-to-carrier segment, they should be included in prices. See AT&T at 61, 63; DOJ at ii. Thus, there is no basis for the claims that TSLRIC-based prices will deter ILEC investments or distort their incentives to use efficient technologies that increase shared costs. See, e.g., SBC at 91; USTA at 41. TSLRIC-based pricing provides opportunities for recovery of all of the economic costs that influence such decisions. See Baumol, Ordover & Willig Reply Aff. ¶ 2.

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[52] NYNEX at 57; see also DOJ at 33 ("alternative pricing standards entail a substantially greater risk of impeding, rather than promoting, the emergence of competition"); Indiana URC at 22 ("[we have] significant concerns about the use of proxy cost models. A proxy based costing methodology should only be used when another costing methodology, like TSLRIC, cannot be developed"); Missouri PSC at 11 ("Proxy or surrogate costing methods have shown themselves inconsistent and incapable of mirroring known costs, much less serving as a substitute for an actual cost study"); Texas PUC at 24.

For thorough discussions of why the applications of the Efficient Component Pricing Rule and Ramsey pricing standards advocated by some ILECs would be inappropriate and inefficient in this context, see Economides at 1-6 (& Attachment) and Ad Hoc Users at 38-41, respectively.

[53] See, e.g., BellSouth at 51-54; USTA at 44-46; Pacific at 68-69; Bell Atlantic at 35-37; Cincinnati Bell at 24-25; SNET at 29.

Certain ILECs go a step further, speculating that even TSLRIC-based rates that include an increment reflecting all shared and common costs could lead to underrecovery if rapid changes in technology devalue ILEC capital investments and rates are continuously adjusted to reflect those devaluations. See, e.g., NYNEX at 50-51; Ameritech at 68-69. But TSLRIC estimates fully account for the expected rate of technological change.[54] Although TSLRIC-based prices do not account for unexpectedly fast or slow technological changes (a fact that can lead to underrecovery or overrecovery), those same risks and opportunities prevail in all competitive markets. See Baumol, Ordover & Willig Rep. Aff. ¶ 3 & n.1. Firms in competitive markets like those the Act seeks to replicate (as well as firms subject to traditional or incentive regulation) have opportunities to recover their costs, not guarantees. Further, the ILECs offer no evidence that (notwithstanding the fact that initial TSLRIC estimates are likely to overstate the relevant economic costs, see AT&T at 51) underrecovery is any more likely than overrecovery. In any event, the "changing technology" argument is largely a red herring here--the technology for providing basic narrowband telephone services has not changed in material ways in recent years, and the technology reflected in the Hatfield Model TSLRIC estimates does

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[54] See Baumol, Ordover & Willig Reply Aff. ¶ 3. See also Kahn and Shew, Current Issues in Telecommunications Regulation: Pricing, 4 Yale J. on Reg. 191, 222 (1987) (TSLRIC (or stand-alone cost) is the appropriate price ceiling even in competitive, capital-intensive industries with rapidly changing technology). Indeed, the ILECs have conceded as much in state rate proceedings relating to their competitive Centrex services. See, e.g., Testimony of David Ho at 2 (on behalf of Southwestern Bell Telephone Company), Inquiry into Pricing Practices of Southwestern Bell Tel. Co. Under the ESSX Custom Tariff, Docket No. 6771 (Tex. May 5, 1986) ("Incremental costs are appropriate for use as a basis for pricing products or services because they reflect the direct cost Southwestern Bell Telephone Company would incur in providing the product or service. Southwestern Bell's incremental costs are 1) based on the fundamental principle of cost causation and direct cost responsibility, and 2) are prospective in nature, enabling the Company to base its prices for the future on data related to the future"); Southern Bell Telephone Company's Response to First Data Requests and Interrogatories at item no. 5, Southern Bell Tel. & Tel. Co.'s ESSX and Digital ESSX Tariff filing, Docket No. 3765-U (Ga. PSC 1988) ("It is appropriate and a common practice to use long-run incremental cost studies for competitive services").

not differ markedly from the ILECs' embedded technology with the sole exception of strategic investments that ILECs have made in broadband technologies that would be used to provide video and enhanced services.[55]

The proper inputs and assumptions to be used in TSLRIC estimates will undoubtedly be disputed by the parties. Such evidentiary matters readily can be resolved, such as by the states on the basis of the best evidence presented in individual TSLRIC arbitration proceedings.[56]

2. There are no legal obstacles to TSLRIC-based pricing.

The Act expressly forbids the determination of network element rates by reference to embedded cost "rate of return or other rate-based" standards. § 252(d)(1)(A). Nonetheless, several ILECs struggle to find a congressional mandate for their flawed embedded cost approach.

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[55] See May 29, 1996 Affidavit of Lee L. Selwyn & Patricia D. Kravtin ¶¶ 5-6 ("Selwyn & Kravtin Aff.") (Appendix C). For this reason, the suggestion that "engineering judgments" about the cost of constructing "optimal networks" would be "arbitrary" and "hypothetical," Crandall Aff. ¶¶ 14-15, rings hollow. As state public utility commissions and others point out in their comments, see, supra, 25 n.41, forward-looking cost studies are by now commonplace. And, as with any other ratemaking exercise, regulators and arbitrators deal with uncertainty by employing a best evidence standard. See Baumol, Ordover & Willig Reply Aff. ¶¶ 13-14.

[56] See Baumol, Ordover & Willig Reply Aff. ¶ 13. There undoubtedly will be other input assumptions over which the parties to arbitrations will disagree but which in no way detract from the efficiency of the TSLRIC standard itself. The ILECs' affiants, for example, express concern that increased risks associated with the competition mandated by the Act will render existing cost of capital estimates "perilously low." See, e.g., Crandall Aff. ¶ 18. In fact, economic cost-based pricing of network elements should lower the risk of underutilization of ILEC facilities by decreasing the risk of inefficient facilities-based bypass of the ILECs' networks. See Baumol, Ordover & Willig Reply Aff. ¶ 15.

The ILECs criticisms of the BCM and Hatfield also largely focus on model inputs (primarily earlier versions of both models) and are largely baseless. The ILECs are simply wrong, for example, in suggesting that the Hatfield model ignores line drop, splicing, cross-connect and other loop costs, assumes only one type of switch, and fails to properly account for business lines. In this regard, Appendix D hereto explains several recent modifications to the Hatfield Model and provides illustrative upper bound TSLRIC estimates for each of the initial eleven unbundled network elements proposed by AT&T (as well as unit volumes and costs for each element) for 49 state jurisdictions.

NYNEX (p. 42) and Pacific (p. 66), for example, claim that courts have always interpreted the "just and reasonable" standard that appears in § 251 to require prices based on "actual" (i.e, embedded) costs. To the contrary, even if the more specific command of § 252 did not require economic cost-based rates here, it is black letter law that rates need not reflect embedded costs to be "just and reasonable."[57] USTA's claim that the "reasonable profit" language of § 252 precludes TSLRIC pricing (and requires fully distributed embedded cost pricing) because no "profits" are earned without a markup over TSLRIC is equally meritless. As an initial matter, § 252 states only that rates "may" include a reasonable profit and further directs that rates be based on the "cost . . . of providing the interconnection or network element" (§ 252(d)(1)(A)(i)) in question, not on the firm's total costs. In any event, TSLRIC will fully compensate ILECs for their "cost of capital," a term that, at least in the regulatory context, is synonymous with "profit."[58]

There is similarly no basis for the ILECs' contentions that the adoption of standards requiring TSLRIC-based rates for network elements (indeed, any rates other than embedded cost-based rates) will violate the "takings" clause of the Fifth Amendment of the Constitution. The Constitution has absolutely nothing to say about regulatory rate methodologies; it requires only

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[57] See, e.g., Mobil Oil Exploration & Producing Southeast Inc. v. United Distribution Cos., 498 U.S. 211, 219 (1991); FERC v. Pennzoil Producing Co., 439 U.S. 508, 517 (1979) (agencies are under no obligation to "base[] each [carrier's] rates on his own [embedded] costs" (quotation omitted); Union Pac. R.R. v. ICC, 867 F.2d 646, 653 (D.C. Cir. 1989) (approving forward-looking cost-based rates as "just and reasonable). See also Duquesne Light Co. v. Barasch, 488 U.S. 299, 309 (1989) (forward looking price standards "give[] utilities strong incentive[s] to manage their affairs well and to provide efficient service to the public"); BellSouth at 49 ("Rates that recover long run incremental costs, contribute to the recovery of joint and common costs and include a reasonable profit clearly would fall within the just and reasonable standard").

[58] See, e.g., Baumol, Ordover & Willig Reply Aff. at n.6; Doane, Sidak & Spulber Aff. at I-4 n.3 (citing literature).

that the "end result" be "just and reasonable."[59] And the relevant precedents leave no doubt that rates that do not jeopardize the "financial integrity" of the firm and that allow the regulated firm "to raise future capital" and to recover all other economic costs associated with their carrier-to-carrier operations -- as TSLRIC-based rates would[60] -- are just and reasonable.[61]

Indeed, notwithstanding the Commission's request that parties comment on the empirical magnitude of embedded costs that would not be recovered under an economic cost approach, not a single ILEC even attempts to do so, much less to identify the types of "costs" that would not be recovered.[62] This silence is telling. As Professors Baumol, Ordover and Willig explain in their reply affidavit, there are a variety of explanations for any difference between existing ILEC revenues and revenues that may be produced by efficient network element rates. For example, as explained in the Baumol, Ordover & Willig Rep. Aff. ¶¶ 5-7, most of the explanations relate to the very inefficiencies, overearnings, and cross-subsidies that Congress sought to exclude

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59 See, e.g., FPC v. Hope Natural Gas Co., 320 U.S. 591, 602-03 (1944) (agencies are "not bound to the use of any single formula or combination of formulae in determining rates").

60 See, e.g., NYNEX 1995 Form 10-K at 9 (writing off $2.9 billion in recognition of "shorter asset lives for certain categories of telephone plant and equipment than those previously approved by regulators," which was "not expected to have a significant impact on financial results in future periods"); Sprint at 60-61 ("many major ILECs -- including Sprint's . . . [took] substantial write-downs of plant on their financial books, conforming those books to the accounting standards for non-regulated firms, without any impairment in their ability to continue raising capital").

61 Duquesne Light Co. v. Barasch, 488 U.S. 299, 312 (1989). See also Jersey Cent. Power & Light Co. v. FERC, 810 F.2d 1168, 1181 n.3 (D.C. Cir. 1987) (en banc) ("absent the sort of deep financial hardship described in Hope, there is no taking").

62 Several ILECs suggest a comparison between a Hatfield Model TSLRIC estimate of ILECs' carrier-to-carrier operations and the ILECs' total regulated businesses accounting costs, noting that the former is only 44% of the latter. That "apples-to-oranges" comparison is meaningless, however, because the referenced Hatfield figure estimates costs only of unbundled network elements, and not of retail operations and broadband and other enhanced facilities which are included in the accounting figure (and which have separate revenue sources). See Appendix D.

from network element rates and that enjoy no constitutional protection regardless of their magnitude.[63]

That is why the ILECs hint that the "shortfall" may reflect the technological obsolescence of embedded plant or artificially long depreciation schedules, implying (erroneously) that the Constitution guarantees recovery of such costs.[64] But the ILECs' vague generalizations -- for which they again provide no empirical support -- are belied by the facts that: (1) the majority of the ILECs' embedded plant was installed after 1990, see Selwyn & Kravtin Aff. ¶ 5; (2) the ILECs' "old" embedded plant is largely copper loop distribution, which is the same loop technology best suited for narrowband telephony services today (and assumed by forward-looking models like Hatfield), see id.; (3) the forward-looking TSLRIC replacement cost of this old plant may in many cases be higher than the ILECs' embedded costs, see id.; and (4) the depreciation reserve deficit as a fraction of gross book value for ILECs is less than 2%.[65] Thus, far from "confiscating" ILEC property, requiring ILECs to charge economic cost-based rates would

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[63] See, e.g., Bluefield Waterworks & Improvement Co. v. PSC of West Va., 262 U.S. 679, 693 (1923) (rates "should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties") (emphasis added); Jersey Central, 810 F.2d at 1180-81 ("a company that is unable to survive without charging exploitative rates has no entitlement to such rates"); Second Report and Order, First Order on Reconsideration, and Further Notice of Proposed Rulemaking, Implementation of Sections of the Cable Television Consumer Protection and Competition Act of 1992, 1996 FCC LEXIS 372, * 47 (January 26, 1996) (rejecting takings challenge because rates "should not include costs resulting from any expectation of monopoly profits").

[64] Compare Pacific at 67 ("if it precluded recovery of any portion of actual costs . . . the Commission would raise serious Constitutional issues") with Duquesne Light Co. v. Barasch, 488 U.S. 299, 312 (1989) (affirming disallowance of prudently incurred nuclear power plant investments); Illinois Bell Tel. Co. v. FCC, 988 F.2d 1254, 1263 (D.C. Cir. 1993) (no obligation "to include in the rate base all actual costs for investments prudent when made").

[65] See Baseman and Van Gieson, Depreciation Policy in the Telecommunications Industry: Implications for Cost Recovery by the Local Exchange Carriers, pp. 2-4 (Dec. 1995).

merely remove inappropriate windfalls.[66] Under these circumstances, the ILECs display extraordinary temerity in seeking to cloak in constitutional terms their bare desire to maintain their bloated revenues. That is particularly so because the Commission does not propose immediate reform of the inflated access charges that produce multibillion dollar overcharges to consumers (see American Petroleum Institute at 8-14), and because the rules will have no impact on the ILECs' revenues until ILECs actually lose exchange customers to (as-yet-nonexistent) competitors in the marketplace.[67]

C. AT&T's Rate Structure, Price Discrimination, And Reciprocal Compensation Proposals Are Well Supported.

Clear and binding national rules to constrain anticompetitive ILEC conduct are crucial. See AT&T at 66-68. Among the ILECs, only BellSouth and USTA even address rate structure. Both concede that "the Commission's proposal that costs be recovered in the manner in which they are incurred is sound" and that "dedicated facilities (such as interconnection and dedicated transport) [should] be priced at a flat monthly rate," but complain that "rigid" Commission rules could "interfere" with the ability of parties to custom tailor agreements to address technological changes and other circumstances. USTA at 56-57. See also BellSouth at 57-58. AT&T proposes principles to be implemented by the states, and these rules would only apply when

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[66] There is no merit to claims by U S West (pp. 29-32) and GTE (pp. 66-68) that regulating the use and prices of network elements is a "permanent physical occupation" of real property that implicates the per se takings rule of Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 441 (1982). The provision of unbundled elements is precisely the kind of commercial activity that telephone carriers inherently perform and that is subject to strict regulation in the public interest. See, e.g., Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1027-28 (1992) ("by reason of the State's traditionally high degree of control over commercial dealings, [an owner] ought to be aware of the possibility that new regulation might even render [its] property economically worthless"); Yee v. Escondido, 503 U.S. 519, 522 (1992).

[67] See, e.g., Texas Off. Pub. Util. Council at 23 ("The Commission should prevent state commissions, pressured by incumbent LECs, from concocting costs that are a hybrid of incremental costing and make-whole provisions").

parties are unable to reach private agreements. See supra p. 6.

Strict antidiscrimination guidelines are also critical to limit monopoly abuses. See AT&T at 68-69. Pacific, BellSouth and USTA, the only ILECs to address price discrimination, also urge the Commission to clarify the Act's antidiscrimination requirement. See Pacific at 76-77. AT&T agrees with these ILECs that truly cost-justified price differences are not discriminatory. The Commission should, however, reject Pacific's invitation to create a rule allowing price discrimination for any network element for which marginal cost per unit declines as output rises. See id. at 77. There is no precedent for such an ambiguous and open-ended loophole, and it could eviscerate the Act's antidiscrimination protections.

Finally, the comments confirm the appropriateness of rules that would ultimately require reciprocal compensation arrangements based on TSLRIC, but that would prescribe bill-and-keep arrangements until the cost determinations are made. As the comments show, these are already the requirements in a number of States,[68] and (in the case of bill-and-keep) are already practiced between ILECs. See NPRM ¶ 243; DOJ at 35; SBC at 53 n.99.

Contrary to the ILECs' claims,[69] § 252(d)(2) does not mandate recovery of their total actual costs, but requires only that reciprocal compensation be based on a "reasonable approximation" of the "additional costs" (e.g., marginal or incremental costs) of terminating calls originating on another network. Id. § 252(d)(2)(A)(ii). That standard is plainly satisfied

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[68] A number of States have adopted bill-and-keep as an interim solution. See NPRM ¶¶ 227, 240; USTA at 79, 84 n.67; Ameritech at 79 n.115; Pacific at 93; Oregon PUC, Attachment A at 54; California PUC at 41; Colorado PUC at 58-59. See also Texas PUC at 33 (state statute contemplates interim bill-and-keep where no agreement reached); Ohio PUC at 76-77; Wyoming PSC at 37-38. Illinois has adopted symmetrical compensation, basing reciprocal termination rates on the long-run service incremental costs (i.e., TSLRIC) of Ameritech Illinois. See Illinois Comm. at 79. See also Mass. DPU at 13; Michigan PSC at 23.

[69] See, e.g., BellSouth at 72-73; SBC at 51-52; Bell Atlantic at 40-41; NYNEX at 88-89; Pacific at 95.

if reciprocal compensation is based on the ILEC's total service long-run incremental costs, as Ameritech (p. 79) and USTA (p. 79) appear to concede.

The ILECs also err in arguing that § 252(d)(2)(B)(i) precludes bill-and-keep arrangements absent voluntary agreement by the parties.[70] To the contrary, that provision states that the Act does not preclude arrangements that "afford the mutual recovery of costs through the offsetting of reciprocal obligations, including arrangements that waive mutual recovery (such as bill-and-keep arrangements)." The Commission has clear authority under § 251(d) and § 154(i) to require such arrangements and to waive mutual recovery as an interim measure, for there is nothing in the Act that remotely requires the "waivers" to result from private agreement.

There is no basis for the ILECs' argument that a requirement of bill-and-keep would be a "taking." See BellSouth at 74-75; Bell Atlantic at 41-42; NYNEX at 89; U S West at 70. Apart from the reasons discussed above (pp. 31-34, supra), these claims rest on the speculative and erroneous premise that bill-and-keep would provide no (or inadequate) compensation. As Congress recognized, bill-and-keep allows each carrier compensation "in-kind" in the form of access to the other carrier's network.[71] Further, as commenters explain,[72] the relevant economic costs of transporting and terminating another carrier's traffic may be close to zero; there is no reason to believe there is likely to be a substantial imbalance in traffic; and the system would apply only until a valid permanent solution is available.

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[70] See, e.g., BellSouth at 73-74; SBC at 52; Bell Atlantic at 41; NYNEX at 85; Ameritech at 78-79; Pacific at 95.

[71] See Joint Explanatory Statement, p. 120 (interconnection agreements "may include a range of compensation schemes, such as an in-kind exchange of traffic without cash payment").

[72] See DOJ at 34; NPRM ¶ 241; NCTA at 31-33, 55-56 and NCTA Pricing Study at 31-33.

IV. THE COMMISSION'S RULES SHOULD ENSURE THE DEVELOPMENT OF COMMERCIALLY VIABLE SERVICE RESALE.

The ILEC comments have similarly confirmed the necessity of national rules that will assure that the service resale authorized by § 251(c)(4) is commercially viable. For just as ILECs would preclude effective use of unbundled elements to create alternative offerings under § 251(c)(3), they have simultaneously signalled their intent to make service resale meaningless.

A. The Commission Should Reject The ILECs' Attempts To Restrict The Services Available For Resale.

Despite the requirement that ILECs "offer for resale at wholesale rates any telecommunications service that the carrier provides at retail" (§ 251(c)(4)(A)), the ILECs propose that a host of different services and service arrangements be either severely restricted or excluded entirely from the resale obligation. The Commission should foreclose such claims by adopting rules that require all ILEC services to be available for resale at whatever retail rates the ILEC charges less avoided costs. For example, the rules should forbid the ILECs from prohibiting the resale of retail services that are offered at promotional or discounted rates or pursuant to customized contracts or contract tariffs.[73] These are unquestionably telecommunications services provided by the ILECs to non-carrier customers, and are thus subject to the explicit statutory duty that they be made available for resale at those discounted rates, minus avoided retail costs. As the Justice Department has stated, service resale competition for customers of promotional plans and similar discounted offerings would otherwise be "nullif[ied]" or "at least dilut[ed]." DOJ at 54.

Similarly, the Commission's rules should foreclose the ILECs from avoiding their resale obligations by "withdrawing" services that they continue to provide to their existing retail

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[73] See, e.g., USTA at 72; GTE at 49-50; Ameritech at 57; BellSouth at 66; Bell Atlantic at 45-46; NYNEX at 76-77; Pacific at 87-88; SBC at 72; SNET at 32-34; Cincinnati Bell at 33.

subscribers on a "grandfathered" basis[74] -- as many ILECs have already attempted to do.[75] This ruse would enable ILECs both to eliminate service offerings that provide the most attractive resale opportunities for other customers and altogether to insulate their own "grandfathered" customers from competition. As the Justice Department has stated (p. 56), it "seems particularly clear that [Section 251(c)(4) of] the Act by its terms" prohibits this stratagem, for "the ILEC is certainly continuing to provide the service" when it is provided to existing customers.

Next, several ILECs claim that they have no duty to allow resale of any services that are claimed to be offered at "below cost" rates (even where the resold services would be limited to the same class of allegedly subsidized customers).[76] This is a transparent attempt to preclude service resale in areas where it is initially most important, for the ILECs have simultaneously claimed that all basic residential telephone service are offered below cost.[77] The claim is also foreclosed by the Act's requirement that wholesale rates be developed under the statutory formula for any retail service. Nor is there any basis for the purported concern that permitting the resale of below-cost services could cause hardship to the ILECs. See AT&T at 80 n.119.

By proposing an array of other anticompetitive restrictions, the ILECs confirm the need for the Commission to adopt its tentative conclusions that "few, if any, conditions or limitations [on resale] should be permitted because such restrictions generally are inconsistent with the pro-competitive thrust of the Act" (NPRM ¶ 197), and that there should be only one restriction on

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[74] See, e.g., USTA at 72; GTE at 48-49; Ameritech at 54-55; NYNEX at 75; Pacific at 87; SBC at 73; Cincinnati Bell at 34.

[75] See AT&T at 76-78; DOJ at 56 n.28; ACS at 59-60; MFS at 71.

[76] See, e.g., GTE at 45; U S West at 64, 67; Pacific at 89; USTA at 74; SNET at 31-32.

[77] See, e.g., GTE at 45 (contending that all residential telephone service is priced at rates that do not cover costs); USTA at 74 (contending that all residential basic exchange service is provided at below-cost retail rates).

resale: a state commission may limit resale of a subsidized service (e.g., Lifeline services) to the subscribers eligible to receive that service from the ILEC at retail. Id. ¶ 176. Beyond that narrow exception, there are no permissible restrictions (see also DOJ at 54). In this regard, the Commission should foreclose attempts of ILECs to use arbitrary "service definitions" to prevent resale of Centrex and other business services that could not be claimed to be below-cost, but that represent attractive resale vehicles. See SBC at 69-70.

B. The Commission Should Reject The ILECs' Attempts To Set Uneconomic Wholesale Rates.

The ILECs also propose several methods for determining wholesale rates for their retail services that would have the effect of inflating the wholesale rates and thereby eliminating resale as a commercially viable means of providing local service pending the development of other forms of entry. The Commission's rules should reject these as well.

For example, several ILECs propose that wholesale rates should be based on "standard" or "average" rates, not the discounted or other rates that customers actually pay.[78] This claim is foreclosed by § 252(d)(3)'s prescription that "wholesale rates" be determined "on the basis of retail rates charged to subscribers for the telecommunications service requested," not on some purportedly "standard retail" or hypothetical average rate. ILECs could otherwise preclude resale competitors from charging rates that are competitive with the ILECs' actual charges--as the Illinois Commerce Commission's hearing examiner recently held. See May 16 Proposed Illinois Order at 22.

Similarly, the Commission should preclude ILECs from inflating "wholesale rates" offered to resale competitors by minimizing "avoided costs." For example, the ILECs claim that

[78] See, e.g., Bell Atlantic at 45-46; Ameritech at 57; NYNEX at 76; U S West at 67.

they can exclude from "avoided costs" any costs claimed to be joint and common.[79] But avoided costs include all costs associated with the ILECs' retail operations, including an appropriate portion of shared, common and general overhead costs (e.g., the variable or otherwise attributable portions of such costs).

The Commission's rules should also prevent ILECs from inflating wholesale rates by adding in retail costs that they would continue to incur or that would be increased because of the creation of resale competition. For example, NYNEX contends (p. 81 & n.149) that because a shift of service provided by an ILEC from retail to wholesale would not necessarily reduce (and might even increase) the ILEC's retail advertising costs, those costs should not be deemed avoided by resale. This is simply an unlawful attempt to impose on competitors a share of the ILEC's retail costs of competition, contrary to § 251(c)(4)'s terms.

The Commission should reject the similar arguments of ILECs, CAPs, and CATV firms that wholesale rates be calculated not by merely subtracting the billing, marketing, and other costs that would be avoided, but by also adding new costs ILECs purportedly would incur in providing wholesale service.[80] That would enable ILECs to claim that ALECs should receive no (or only a de minimus) discount by opening the door for the potential inclusion of a multitude of additional "costs"[81] -- as evidenced by the fact that, to date, ILECs have only offered single

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[79] See, e.g., USTA at 74; GTE at 52; Ameritech at 80; BellSouth at 67; Pacific at 90; Cincinnati Bell at 35.

[80] See, e.g., USTA at 73-74; GTE at 53; Bell Atlantic at 44; BellSouth at 67; NYNEX at 83; Pacific at 86; SBC at 75; Cincinnati Bell at 36.

[81] See, e.g., Time Warner at 79 ("In some instances, those [wholesale] costs may be as great as or even greater than those expended in servicing retail customers"); MFS at 74 (wholesale costs "may offset some or all of the costs otherwise avoided by providing services at the wholesale level"). In fact, the avoided cost discount proposed in negotiations by almost every RBOC has been less (often, significantly less) than 10%. See AT&T Comments at 82 & n.124 (explaining that discount of 5% is not commercially viable).

digit discounts. Allowing such claims would lead not only to complex and costly disputes before the state commissions, but also to the probable elimination of commercially viable resale in direct conflict with the clear intent of the 1996 Act. See May 16 Proposed Illinois Order at 24.

That is why the 1996 Act's terms foreclose any such claim by unambiguously providing that wholesale rates shall be determined "on the basis of retail rates charged to subscribers for the telecommunications service requested, excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier." § 252(d)(3). The Act seeks to foster resale competition by precluding any additions to the wholesale rate, or any "offset" or "netting" against avoided retail costs that are to be excluded.

For these same reasons, the Commission should reject the attempts of various CAPs and CATV providers to put a 10% ceiling on wholesale discounts or otherwise to make the discounts artificially (and unlawfully) small in order to protect their own facilities investments and to foster facilities-based entry. See e.g., Teleport at 55-59; NCTA at 57-58; Time Warner at 69-71.[82] The plain language of the Act forecloses such protectionist claims. The Act is intended to foster each possible form of new entry. Service resale has long-term limitations, but the Commission's long distance resale rules have proven that resale not only creates immediate benefits for consumers but also serves as a springboard to facilities-based entry by allowing new entrants to build customer bases before developing alternative means of providing service.

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[82] Time Warner has submitted an analysis (attachment 4) purporting to show that operating margins of resellers will be greater than those of their facilities-based suppliers, but that analysis is flawed in numerous and material respects. Most fundamentally, Time Warner fails to explain how a reseller could earn a greater margin than its wholesale supplier if its discount is calculated on the basis of avoided costs. In all events, Time Warner understates the margins earned by facilities-based competitors by misstating basic rates to business customers and completely ignoring access revenues. Time Warner's cost estimates are also unsupported and appear to be excessive.

Finally, the Commission should consider adopting a model to use as an explicit "litmus test" for determining whether a proposed avoided cost discount complies with the Act. See AT&T at 85. AT&T has developed and is currently refining such a model, which is described in more detail in Appendix E hereto, and which calculates for each ILEC in each state the appropriate avoided costs using publicly available accounting and statistical data from ARMIS reports filed with the Commission. For proceedings under §§ 208, 252(e)(5), 253, and 271, the Commission may presume lawful a discount provided by an ILEC that equals or exceeds that calculated by the model and require an ILEC that offers a lower discount to prove its lawfulness.

CONCLUSION

The adoption of the rules proposed in the NPRM and in the Comments of AT&T, DOJ, and others is an essential step in the implementation of the 1996 Act. At the same time, these measures will be insufficient until there are parallel access charge reforms.

Respectfully submitted,

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APPENDICES